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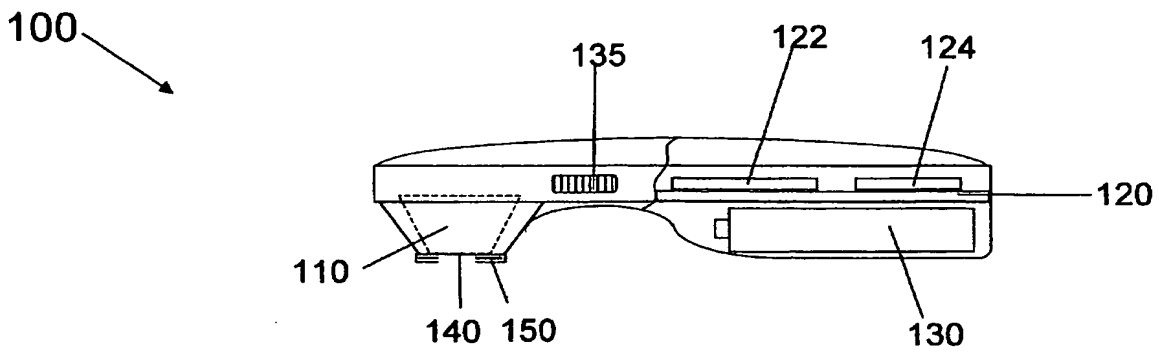

(57) Abstract: Systems and methods for providing spectral measurements are described. In one embodiment, a spectral measuring device (100) comprises at least one radiation source configured to provide N ($N \geq 2$) linearly independent illuminant sources (220) characterized by M ($M \geq N$) wavelength channels in a predetermined wavelength range; a sensor unit (240) including at least one sensor, configured to be in optical communication with the radiation sources (220) and an object (280); a memory (124) storing an illuminant characterization matrix including spectral characteristics of the N illuminant sources (220) in the M wavelength channels; and a processor (122) configured to provide spectral responses of the object in the M wavelength channels, based at least in part on the illuminant characterization matrix. The embodiments of the invention can be used to construct a new class of compact spectral measuring devices, such as handheld color measuring devices.

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